

10/031,351

REMARKS

Claims 8-14 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for the reasons noted in the official action. The rejected claims are accordingly rewritten by the above new claims claim amendments, and the presently pending claims are now believed to particularly point out and distinctly claim the subject matter regarded as the invention, thereby overcoming all of the raised § 112, second paragraph, rejections.

Claims 8-14 are rejected, under 35 U.S.C. § 103(a), as being unpatentable over McKenzie et al. '979 in view of Gierer '948. The Applicant acknowledges and respectfully traverses the raised obviousness rejection in view of the following remarks.

The problem on which the present invention is based is to provide a method for determining characteristic quantities and testing the functioning of an electrohydraulically controlled automatic transmission on a test stand, under load and without separate ventilation of the hydraulic components within a shorter time.

As the Examiner is aware in order to properly support an obviousness rejection under 35 U.S.C. § 103(a), the combined references must provide some disclosure, teaching or suggestion which would lead one of skill in the art to achieve the presently claimed invention.

As discussed by the Applicant in the Background, paragraphs 8 and 9, Gierer '948 discloses a method for determining characteristic quantities of an electrohydraulically controlled automatic transmission on a testing stand with quick tying of the electronic control. In this testing method, during the gearshifts, a transmission input speed, a transmission output rotational speed, as well as a transmission input and a transmission output torque and the time dependent function curves thereof are measured. From these measured values are determined as characteristic quantities of the automatic transmission for the clutch to be engaged during the gear change, a filling time, a charge pressure, a reaction time, a frictional value of the disks and a pressure liquid charge. These characteristic quantities are thereafter stored in a memory so that the electronic transmission control unit can correct, according to the determined

characteristic quantities, the pressure level and the time of the rapid filling pressure of the charge pressure, as well as the pressure level of the shifting pressure.

By the method disclosed in Gierer '948 the entire drive train can be tested so that control and transmission tolerances are entirely detected. This leads to greater tolerances of the parts and thus to a less costly production. Since the values that characterize the respective transmission are stored in a memory, a quicker coincidence of the actual and nominal values is obtained in the electronic transmission control unit, even in case of great divergences between actual and nominal values. However despite this, in Gierer '948 an interconnection under load of the automatic transmission prior to the actual test for ventilating the clutches and pipes is still required with this method.

Different than Gierer '948, McKenzie '979 discloses a transmission clutch calibrating method wherein the transmission output shaft is blocked during the calibration operation. The methods disclosed by each reference are specifically method dependent. The disclosed steps of either measuring the output speed or blocking the output shaft and are in fact entirely opposite so that a combination of one with the other would not work. Therefore the Applicant believes that these references cannot be properly combined and also that the methods are entirely different that the references teach away from such a combination.

Even if the references could possibly be combined, and this is adamantly not conceded by the Applicant, it is another important object of McKenzie '979 to use a calibration method that is substantially the same control method that is used during normal operating conditions. Therefore, the test bench for calibrating the clutches is substantially the same as the drive train of the vehicle in which the transmission normally installed.

McKenzie '979 teaches to calibrate the transmission clutches at stand still (blocking) of the transmission output shaft and idling condition of the engine driving the transmission input shaft. McKenzie '979 also teaches to determine the clutch calibration data by measuring the output torque of the engine during engagement of the clutches and comparison of said measured engine torque with a reference engine torque. This means that the step of

".....connecting an output shaft of the transmission with a stationary torque-transmitting hub to block the output shaft;" is not possible with McKenzie '979. Installation of a stationary torque-transmitting hub between the parking brake and the power train or between the transmission output shaft and the parking break would not be feasible. Besides an installation of said stationary torque-transmitting hub between transmission output shaft and park break is impossible if the parking break is an integrated part of the transmission, as disclosed in column 3, lines 17-19. *Hub?*
could be an integral part

Furthermore, the method of engaging the clutches at constant engine speed that is equal to the engine idling speed of the vehicle in which the transmission is installed as taught by McKenzie '979 is substantially different to the calibration method of our application which uses ".....a driving source having preset rotational speeds and load ratios". Also, a thorough review of both references fails to reveal any disclosure, teaching or suggestion as recited in Applicant's claims 21 and 22, namely ".....the step of testing each of the plurality of shifting elements successively and maintaining each of the shifting elements in a closed condition after testing". Therefore the Applicant believes these claims to be allowable irregardless of any combination of the applied references.

In view of the above amendments and remarks, it is respectfully submitted that all of the raised obviousness rejections should be withdrawn at this time. If the Examiner disagrees with the Applicant's view concerning the withdrawal of the outstanding rejection(s) or applicability of the McKenzie et al. '979 and Gierer '948 references, the Applicant respectfully requests the Examiner to indicate the specific passage or passages, or the drawing or drawings, which contain the necessary teaching, suggestion and/or disclosure required by case law. As such teaching, suggestion and/or disclosure is not present in the applied references, the raised obviousness rejection should be withdrawn at this time. Alternatively, if the Examiner is relying on his/her expertise in this field, the Applicant respectfully requests the Examiner to enter an affidavit substantiating the Examiner's position so that suitable contradictory evidence can be entered in this case by the Applicant.

In view of the foregoing, it is respectfully submitted that the raised obviousness rejection(s) should be withdrawn and this application is now placed in a condition for allowance. Action to that end, in the form of an early Notice of Allowance, is courteously solicited by the Applicant at this time.

The Applicant respectfully requests that any outstanding objection(s) or requirement(s), as to the form of this application, be held in abeyance until allowable subject matter is indicated for this case.


In the event that there are any fee deficiencies or additional fees are payable, please charge the same or credit any overpayment to our Deposit Account (Account No. 04-0213).

Respectfully submitted, 

Scott A. Daniels, Reg. No. 42,462
Customer No. 020210
Davis & Bujold, P.L.L.C.
Fourth Floor
500 North Commercial Street
Manchester NH 03101-1151
Telephone 603-624-9220
Facsimile 603-624-9229
E-mail: patent@davisandbujold.com

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service, with sufficient postage, as First Class Mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231 on February 5, 2003.

By: 

Print Name: Scott A. Daniels